

under pressure at 0.1-0.4 N/mm². Pref., the surface of (A) facing (B) has an embossed structure.

Pref., (A) consists of 90-60 pts. wt. isotactic PP or EP copolymer contg. up to 25 wt.% ethylene, 10-20 pts. wt. rubbery copolymer compatible with PP (e.g. EPDM, SBS copolymer) and 20-40 pts. wt. reinforcing fillers (talcum, chalk, glass fibre, etc.); (B) is obtd. e.g. by foaming a mixt. of PP with blowing agent (e.g. fluorocarbon) and normal additives, etc.

USE/ADVANTAGE - The invention provides solid plastic/foam laminated composite for use in the prodn. of insulating, shock-absorbing prods., e.g. bumpers, head-rests, dashboard panels, door linings, arm rests etc. for motor vehicles. A strong, durable bond is obtd. by welding the 2 components together, and the prods., being made of only one type of plastic, are easily recycled. (3pp Dwg.No.0/0)

Abstract (Equivalent): EP 528879 B

A process for the production of a composite comprising at least one solid base layer, produced by injection moulding, of a propylene polymer by bonding the two layers, where exclusively the surface of the base layer facing the foam layer and provided with relief structures is softened by warming to a melt layer depth of from 2 to 3 mm, and the base layer and foam layer are then joined under a pressure of from 0.1 to 0.4 N/mm².

Dwg.0/0

Abstract (Equivalent): US 5300361 A

Prodn. of a polypropylene composite of a base layer, foam layer and top layer comprises injection moulding a base layer of polypropylene with an upper surface relief structure; heating and softening the upper surface of the base layer, melting to a depth 2-3 mm, and application of a polypropylene foam layer; and similarly bonding to an upper polypropylene layer.

USE/ADVANTAGE - The prods. are sound and heat insulating, shock absorbing materials for vehicle components, e.g., dashboards, arm and head rests, door panels, bumpers, etc.. Allows recycling of polypropylene waste.

Dwg.0/0

Title Terms: LAMINATE; POLYPROPYLENE; COMPOSITE; HEAT; ONE; SURFACE; SOLID; POLYPROPYLENE; SUBSTRATE; PRESS; PLASTICISED; SURFACE; OBTAIN; LAYER; POLYPROPYLENE; FOAM

Derwent Class: A17; A95; P73

International Patent Class (Main): B29C-065/02; B32B-005/18; B32B-031/26

International Patent Class (Additional): B29C-067/20; B29D-009/00;

C08J-005/00

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A04-G03D; A11-C01D; A12-S04

Plasdoc Codes (KS): 0002 0009 0011 0017 0037 0205 0060 0229 3151 0241 0242

3153 3154 0248 0250 0251 0306 3159 1095 1180 1201 2211 2214 2218 2306

3221 2371 2401 2437 2446 3228 2492 2496 2536 2617 2625 2632 2635 2646

3252 3254 2726 3300 2829 2844

Polymer Fragment Codes (PF):

001 014 03- 032 034 036 041 046 047 050 055 056 06- 075 117 122 134 15-

174 18- 229 27& 28& 308 309 310 387 42& 42- 421 431 441 443 448 449

454 465 468 477 491 52& 54& 55& 551 556 56& 560 563 567 57& 570 573

575 58& 581 586 597 600 617 672 688 720 721 723

Derwent Registry Numbers: 1541-U; 5090-U; 5214-U

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?ss pn=de 20102194

S6

1 PN=DE 20102194

?t s6/9/all

6/9/1

DIALOG(R)File 351:Derwent WPI

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013817502 **Image available**

WPI Acc No: 2001-301714/ 200132

XRAM Acc No: C01-092791

XRPX Acc No: N01-216584

Lining of an automobil roof comprises two layers which are welded to on

another only at certain places so that air cushions covered by dome-like regions of the upper layer are formed

Patent Assignee: SYMALIT AG (SYMA-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|-------------|------|----------|-----------------|------|----------|----------|
| DE 20102194 | U1 | 20010510 | DE 2001U2002194 | U | 20010208 | 200132 B |

Priority Applications (No Type Date): DE 2001U2002194 U 20010208

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|-------------|------|--------|-------------|--------------|
| DE 20102194 | U1 | 10 | B60R-013/02 | |

Abstract (Basic): DE 20102194 U1

NOVELTY - The lining of an automobile roof comprises two layers (1, 2) and (1', 2') which are welded to one another only at certain places (3) so that air cushions covered by dome-like regions of the upper layer (1, 2) are formed.

USE - For lining of automobile roofs.

ADVANTAGE - The lining offers protection to automobile occupants as a result of its cushioning properties. It also functions as a sound absorber.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross section through the proposed roof lining.

Outer fiber reinforced thermoplastic material (1, 1')

Inner closed-cell foam material (2, 2)

Welds (3)

Air cushions (4)

pp; 10 DwgNo 1/3

Technology Focus:

TECHNOLOGY FOCUS - POLYMERS - Each of the two layers forming the inner lining of the automobile roof consists a fiber reinforced thermoplastic outer layer and a closed-cell foam inner layer of polyolefine.

Title Terms: LINING; AUTOMOBILE; ROOF; COMPRISE; TWO; LAYER; WELD; ONE; PLACE; SO; AIR; CUSHION; COVER; DOME; REGION; UPPER; LAYER; FORMING

Derwent Class: A95; Q17

International Patent Class (Main): B60R-013/02

International Patent Class (Additional): B60R-021/04

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A99-A

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?ss pn=de 4403977

S7 1 PN=DE 4403977

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7/9/1

DIALOG(R)File 351:Derwent WPI

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009982740 **Image available**

WPI Acc No: 1994-250451/ 199431

Related WPI Acc No: 1995-312625

XRAM Acc No: C94-113894

XRPX Acc No: N94-197933

Multilayer material for vehicle trim - has covered foam bonded to carrier layer contg. natural fibres in a binder

Patent Assignee: R & S STANZTECHNIK GMBH (ROSP)

Inventor: SPENGLER E M

Number of Countries: 001 Number of Patents: 002

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| DE 4403977 | A1 | 19940811 | DE 4403977 | A | 19940209 | 199431 B |
| DE 9422147 | U1 | 19980618 | DE 94U22147 | U | 19940209 | 199830 |
| | | | DE 4403977 | A | 19940209 | |

Priority Applications (No Type Date): DE 4303611 A 19930209

Patent Details: